

# 3D Printing in a Small Town

And Why It Matters



# Who We Are

Kristi Sadowski

Chris Carney

M.L.S.

Co-Director & Head of Teen Services

M.S.I.S.

Library Assistant for Technology and  
3D Printing

Assistant Librarian at  
Wilbraham & Monson Academy

# Who Are You?

- What is a *Maker*?
- How many people would say they are a *Maker*?
- Who has used a 3D Printer?
- Who has used a Public Library?

# Who Is a Maker?

Engineers & Builders

Innovators

Knitters, Quilters, &  
Crafters

Artists & Musicians

Authors &  
Illustrators

Bakers & Chefs

# What Creates a Makerspace?

“A collection of tools does not define a Makerspace. Rather, we define it by what it enables: making.”

# Makerspaces in Libraries?



# Makerspaces in Libraries!

A library is a place with resources for self-directed learning and exploration and a makerspace is a place with resources for self-directed learning and exploration.

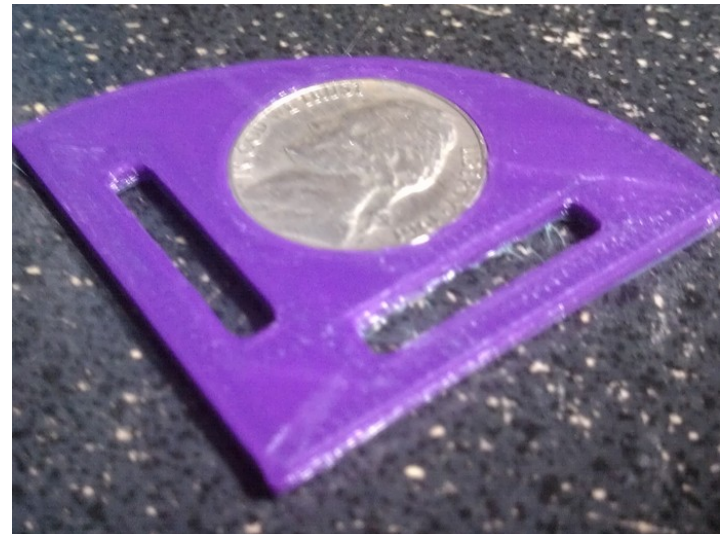
# 3D Printing & Public Libraries

- Why? Why not?
- New technology made easily accessible and new method to engage with trained staff to assist in navigation
- Public libraries are uniquely positioned to serve their community in this facet
- Exposure

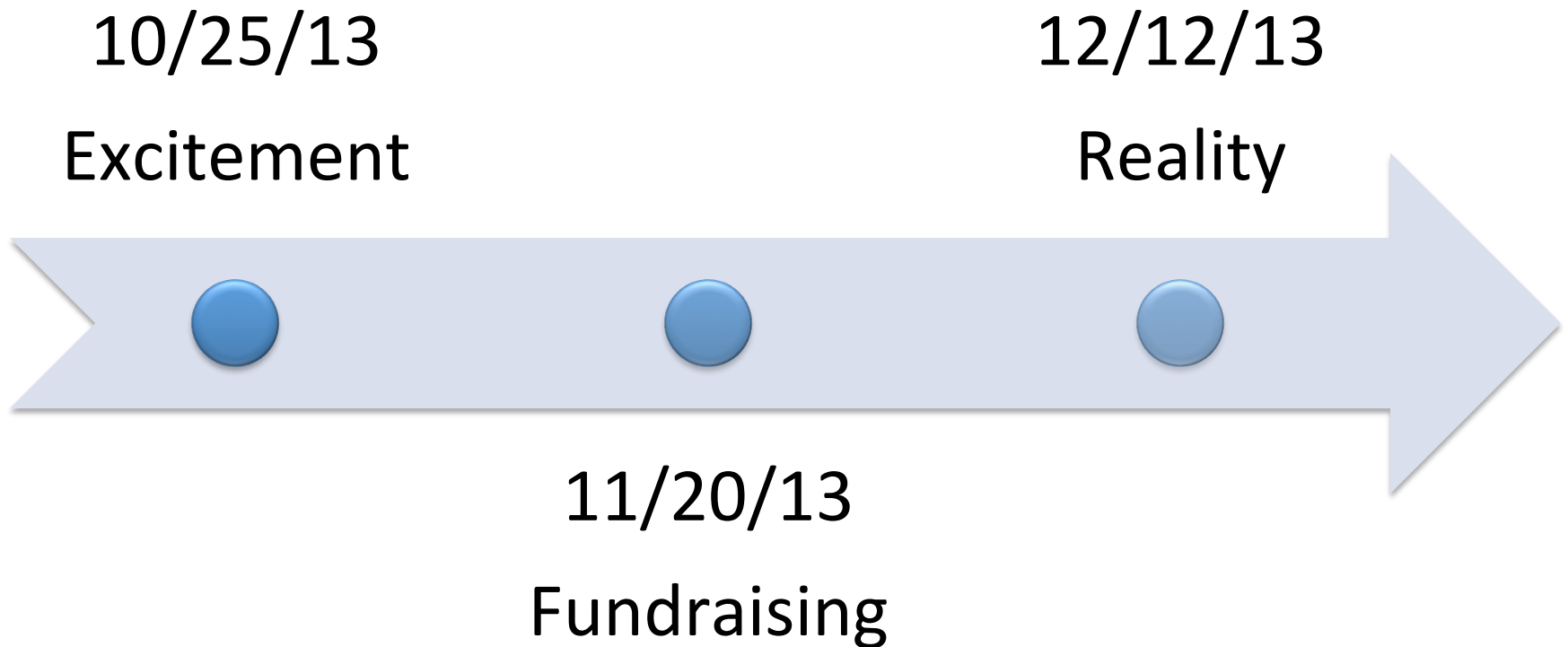


# 3D Printing is Not a Scary Thing

- All that is needed is:
  - Willingness to learn
  - Excitement to try
  - Failing  $\neq$  Failure



# From Idea to Installation



## Entering a new dimension



Al Malpa photos  
Faulkner, 15, explains the  
printing to Coventry resident  
during a demonstration at the  
Memorial Library in Coventry



### Coventry library is raising funds to purchase high-tech 3-D printer

By N STANKIEWICZ  
Staff Writer

Imagine taking a spool of materials and being able to put your mind to — with

may soon be endless at the Mock Memorial Library,

as the library has started fundraising for a 3-D printer to do just that.

"It's the wave of the future," library co-director Kristi Sadowski said. "We are so excited to get one. This is cutting edge."

Three-dimensional printing, a novelty previously reserved for science fiction, is revolutionizing the possibilities of what can be made with plastics and other materials.

Also called additive engineering, 3-D printing makes items layer by layer to bring 3-D objects to life.

Printers can fit on a desk or be industrial-size, all one needs is a laptop to start building.

In an effort to gain support for the library's

new fundraising efforts, staff members hosted a printing demonstration with the help of Coventry resident Evan Faulkner.

The 15-year-old Faulkner, who is a sophomore at the Academy of Aerospace and Engineering at the Greater Hartford Academy of Mathematics and Science, said he's had his printer for just over a year.

"I've already started building a bigger printer," he said.

Faulkner brought things he's printed that have come out to his satisfaction, including his "mess-ups" to show that 3-D printing isn't an exact science.

Some of the items he's made included a miniature bust of Yoda, the famous "Star Wars" character, and a remote-controlled Super Mario Bros. spiny shell, complete with 3-D printed spikes and gears.

"It's a lot of trial and error," he said, while programming the printer to print snowflake ornaments four at a time. "It takes a lot of tweaking

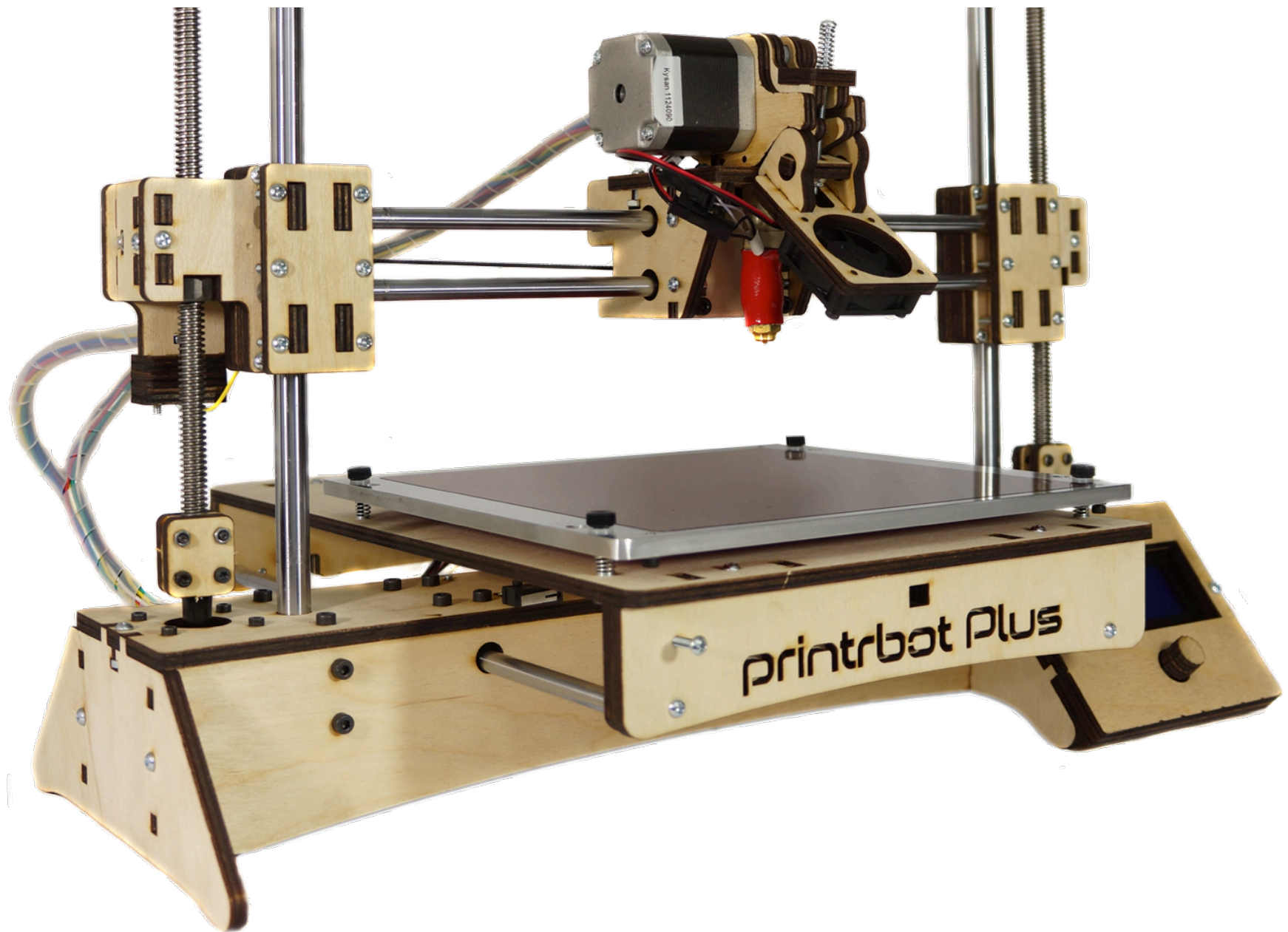
(Library, Page 4)



ABOVE LEFT: During the demonstration, the 3-D printer lays down layers of plastic to create snowflakes. ABOVE: Evan's parents Kirsten Faulkner, left, and Peter Faulkner, right, stand behind a counter filled with objects Evan made with his own 3-D printer, including a Spiny from Super Mario Bros., a propeller, a dragon head and a Grumpy Cat figurine.

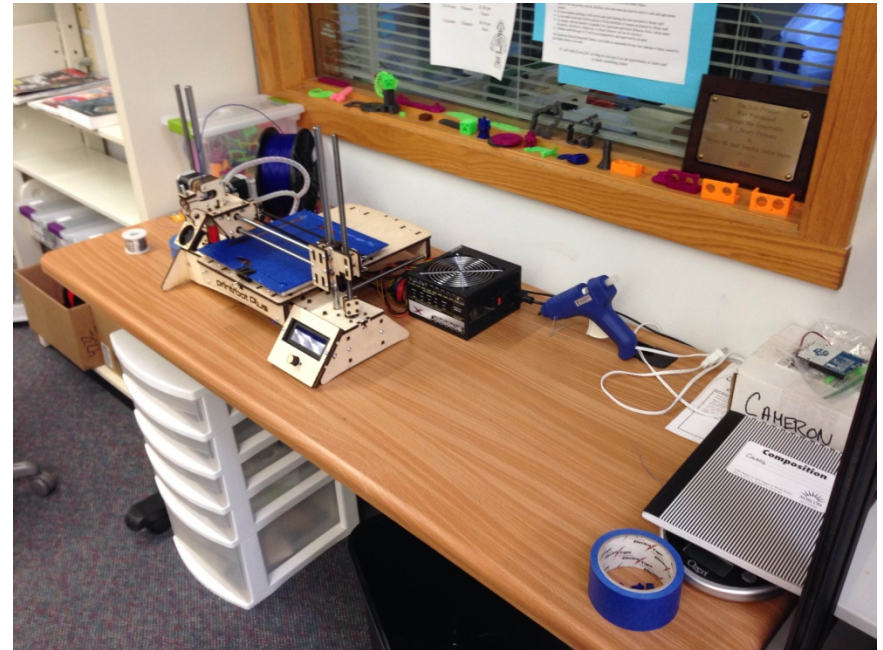
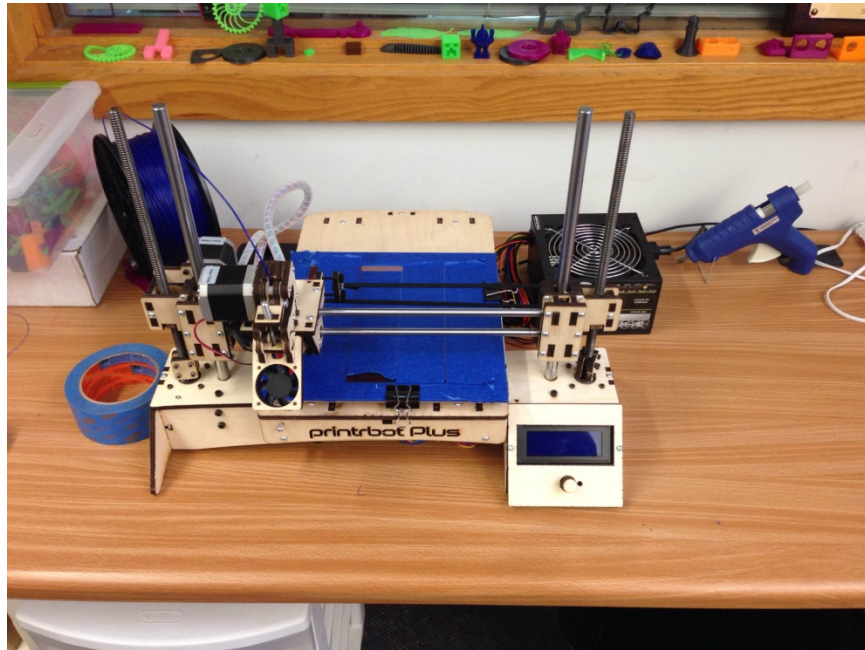




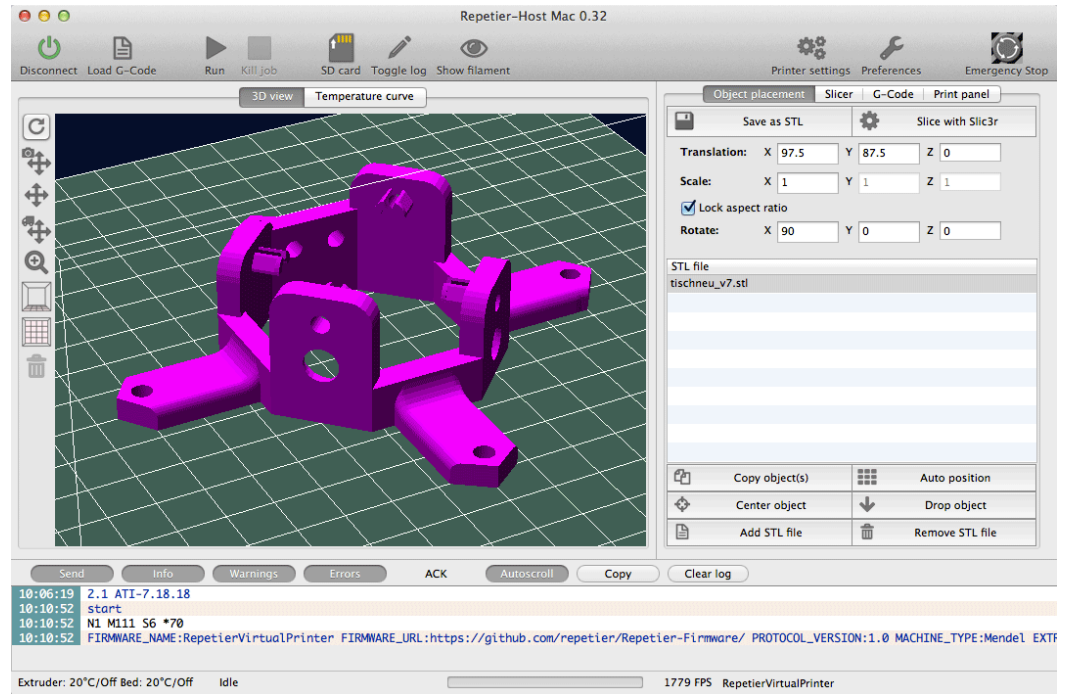


source: printrbot

# Our Makerspace!!!



# Repetier Host- 3D Printing Software







## Thingiverse Featured

The Second Life Mug is an exploration of upcycling in the age of 3D printing. So leave your favorite preserves behind and turn that classic jar into a truly modern mug you can't wait to chug.

[Learn More](#)



### Global Feed

Latest Thingiverse Activity



hodo liked Rubber-Band Bow & Arrow stronger Ve...



G\_R liked Space Invader Toilet Paper Holder



davidnorman314 liked Mesostructured Cellular Mater...



Chooch liked Easy-Install Gopro Scuba Mask Mount w...



jloverso made a thing based on Customizable iPhone...



hvalner liked Raspberry Pi Case 2 (RasPi)

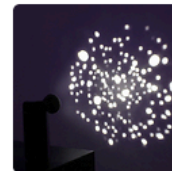
### Featured Collections

Download and print today

[see more >](#)



T-Rex Remix



10 Min Challenge



Customizable



Wearables



Super Users



Household



Challenging



Get Started

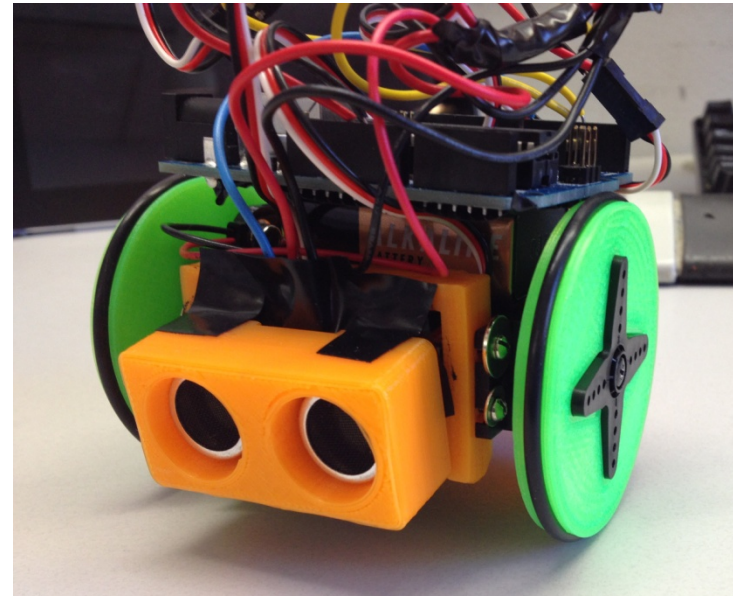
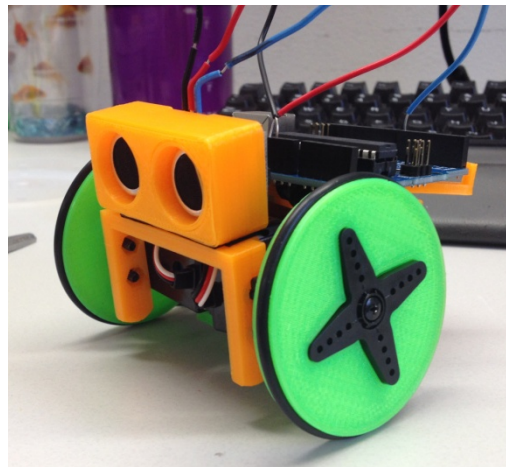
# Support

- Huge maker community
- Reddit, PrintrBot, Thingiverse, etc.
- Any printer issue encountered has been resolved through the online community
  - Jamming, extrusion, temperature, filament, object dimensions, just to name a few



# What We Have Done

- Collaborative Programming
  - Class Visits
  - Boy Scouts
  - Robot Project

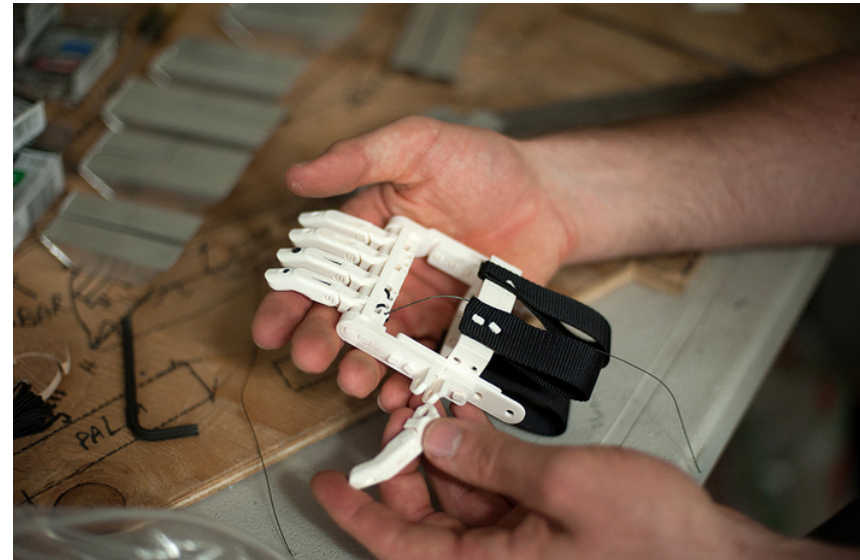


# What We Have Done (cont'd)

- One-on-one sessions with interested members of the library community, especially the teen population
  - Built new relationships and empower members of the teen community
  - Enable them to work the printer themselves so they can teach their peers and other members of the community

# What Others Have Done

- Replace parts from favorite games
- Make pieces for school dioramas
- Make a 3 Dimensional version of a personal creation
- Prototyping
- Print a new printer
- Print a Hand



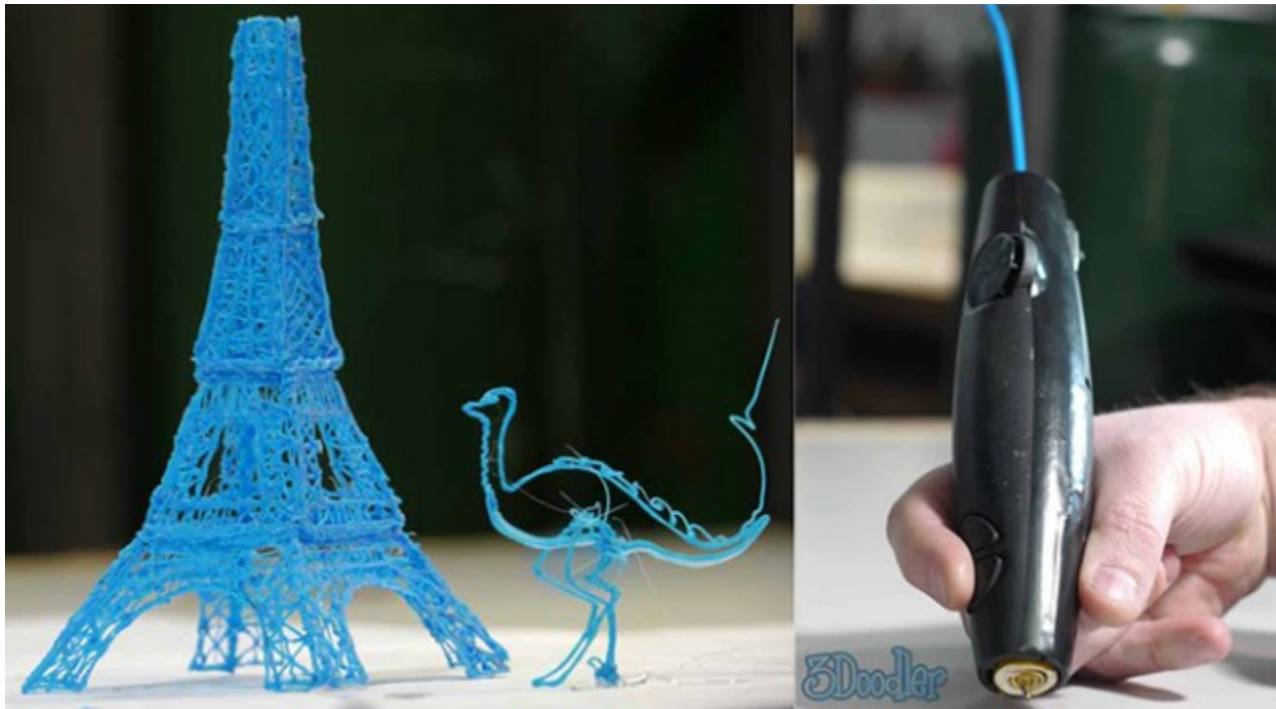
*source: NPR*

# Why It Matters

- Community
- Innovation & Imagination
- STEM/STEAM
- Science-Fiction
- Funding
- Publicity
- Sustainability

# What You Can Do

- Printing on budget—3Doodler



# What You Can Do (cont'd)

- Foster the *Maker Mentality*
  - Lego® Club, Knitting Club, Techie Crafts, Coding
  - Cool gadgets
    - MakeyMakey, Brushbots
  - Program resources
    - Makershed, Pinterest, Make It @ Your Library, Instructables
  - Get excited!



# Contact!

- Kristi Sadowski- [ksadowski@coventryct.org](mailto:ksadowski@coventryct.org)
- Chris Carney- [ccarney@coventryct.org](mailto:ccarney@coventryct.org)